

and Testing Division.

## **SECTION 710 WOOD MATERIALS**

### **710.1-STRUCTURAL MATERIALS:**

Timber, lumber, piles, posts, and blocks shall meet the requirements of AASHTO M168. Preservation and Treatment plants shall meet the requirements of the Book of Standards of the American Wood-Preservers' Association (AWPA).

### **710.2-SPECIES AND GRADE:**

**710.2.1-**Structural softwood shall meet the requirements of the Southern Pine Inspection Bureau (SPIB) grading rules. All wood for structural use shall be visually or mechanically graded for the requirements shown on the Plans or specified in the contract.

**710.2.2-**Structural hardwood shall meet the requirements of AASHTO M168 or the Northeastern Lumber Manufacturers Association (NeLMA) structural grades. The grade and species required shall be as shown on the Plans or specified in the contract.

**710.2.3-**Hardwood used for bridge decking shall meet the Standards of the National Hardwood Lumber Association (NHLA) for sound square edge, be rough sawn and sized by being processed through a hit or miss surfer.

**710.2.4-**All graded material may either carry the appropriate grade stamp, or be inspected by an independent inspection agency approved by the Division.

### **710.3-PRESERVATIVE TREATMENT:**

All timber products requiring preservative treatment by pressure processes shall meet the requirements of AWPA C1 in addition to the specific requirements listed below.

**710.3.1-**All hardwood for highway construction shall meet the requirements of AWPA C2.

**710.3.2-**All softwood for highway construction shall meet the requirements of AWPA C14.

**710.3.3-**All wood products for commercial construction shall meet the requirements of AWPA C15.

#### **710.3.4**

The quantity of preservative shall be as required above, unless modified by the Plans or purchase order.

**710.3.4-**The preservative shall be one of the following:

**710.3.4.1-**Coal tar creosote meeting AWP A P1. Creosote shall be analyzed by AWP A A1.

**710.3.4.2-**Waterborne meeting AWP A P5. Waterbornes shall be analyzed by AWP A A2 and/or A9.

**710.3.5-**Preservative retention shall be determined by gauge or assay. The gauge method shall be approved by the Division for each treatment plant. The assay methods shall be as follows:

**710.3.5.1-**Coal tar creosote by AWP A A6.

**710.3.5.2-**Waterborne by AWP A A11.

#### **710.4-TREATMENT PLANTS:**

Material treated with preservative may be purchased from certified or noncertified plants. Both type of plants shall adhere to the quality control procedures of AWP A M2.

**710.4.1-Certified Plants:** The Division's procedure for plant certification is defined in MP 710.01.40.

**710.4.2-Noncertified Plants:** Material purchased from noncertified plants will be tested on a lot by lot basis. The inspection shall be performed by a Division approved inspection agency. The cost of the inspection will be paid by the supplier. Shipments from noncertified plants shall be documented as described in MP 710.01.40.

#### **710.5-WOOD POSTS:**

Wood posts shall meet the requirements of ASSHTO M168 except round posts may be used for guardrail.

**710.5.1-**Round posts for guardrail shall meet the requirements of Section 5 "Material Requirements" of ANSI 05.1. Round posts for guardrail shall be from the major or minor species of Southern Pine.

**710.5.2-**Rectangular posts for guardrail shall be No. 1 major or minor species of Southern Pine as defined in Section 400 of the SPIB grading rules.

**710.5.3-**Dimensions of all guardrail posts except as noted on the Plans shall be as follows:

### **Round Guardrail Posts**

Diameter: 7"  $\pm \frac{1}{4}$ " (177 mm  $\pm 6$  mm) throughout the length except as noted on Plans.  
 Length: 6'  $\pm \frac{1}{2}$ " (1 828 mm  $\pm 13$  mm)

### **Rectangular Guardrail Posts**

Size: 6"  $\pm \frac{1}{4}$ " X 8"  $\pm \frac{1}{4}$ " (152 mm  $\pm 6$  mm by 203 mm  $\pm 6$  mm) throughout the length except as noted on Plans.  
 Length: 6'  $\pm \frac{1}{2}$ " (1 828 mm  $\pm 13$  mm)

**710.5.4-**Dimensions of wood posts for fence and signs shall be as shown on the Plans.

## **710.6-PLYWOOD:**

**710.6.1-**Plywood shall meet the requirements of Product Standard PS-1 of U.S. Department of Commerce. All plywood shall be identified with the mark of a qualified inspection and testing agency. The identification shall include:

**710.6.1.1-**Species group classification, or class number, or span rating, depending on grade.

**710.6.1.2-**Either interior or exterior.

**710.6.1.3-**Grade name or grade of face and back veneers.

**710.6.1.4-**The symbol PS-1 signifying conformance with the standard.

**710.6.2-**Exterior plywood shall be bonded with exterior glue and the veneers used in manufacture cannot be less than grade C as defined in PS-1.

## **710.7-COMMON LUMBER:**

**710.7.1-**Common lumber is untreated and suitable for general construction and utility purposes. Common lumber is from 2 inches (50 mm) to but not including 5 inches (125 mm) thick and is 2 inches (50 mm) or more in width. Common lumber shall be grade 2 or better when graded by the Board of Review of the American Lumber Standards Committee.

## **710.8**

### **710.8-SERVICE AND LIGHTING POLES:**

**710.8.1:** Wood Service or lighting poles shall be ANSI Class 5, or larger, or as called for on the contract plans. Lighting poles shall be southern yellow pine and service poles shall be either southern yellow pine or Douglas fir. The poles shall be pressure-treated with copper chromium arsenate (CCA) to meet the requirements of AWPA C-14.

## **SECTION 711 PAINTS, COATINGS, OILS, AND INKS**

Paints shall consist of pigments and vehicles conforming to the general requirements of these specifications, proportioned and treated to produce materials possessing the detailed composition and physical properties.

**General Requirements:** The finished products shall not settle excessively nor cake in the container, shall be readily mixed with a paddle to a smooth uniform paint of specified consistency and working properties. The product shall not thicken, liver, skin, or curdle. The paint shall have a storage life of at least 12 months.

All ready mixed paints shall be furnished in containers holding not more than five gallons (20 liters) , unless authorized by the Engineer. Shop paints may be furnished in larger containers providing approved mechanical agitation is available.

Each container shall bear a label with the following information: Name and address of the manufacturer, trade name or trade mark, type of paint, reference to the Division's Standard Specification Number, number of gallons (liters), lot or batch number, date of manufacture, and flash point. The label of two component systems shall include mixing instructions.

Sampling and testing shall be in accordance with MP 711.00.20. Quantities of 50 gallons (200 liters) or less may be accepted on manufacturer's certification.

### **711.1-BLANK**

### **711.2-BOILED LINSEED OIL:**

Boiled linseed oil shall conform to the requirements of ASTM D 260.

### **711.3 THROUGH 711.4-BLANK**

### **711.5-MINERAL SPIRITS:**

Mineral spirits shall conform to the requirements of ASTM D 235.

### **711.6-FIELD PRIMER:**